

7406.00001

I CLAIM:

1. A motion-based apparatus comprising:
one or more passenger units movably coupled to one or more support arms;
5 means for driving said support arms in a generally circular path; and
means for unloading and loading said passenger units during the driving of
said support arms in a generally circular pattern.
2. The motion-based apparatus of claim 1 wherein the one or more passenger
10 compartments are movably coupled to the one or more support arms by means of a
guide member engaging the one or more support arms.
3. The motion-based apparatus of claim 1 wherein the means for driving said
15 support arms is one or more motors.
4. The motion-based apparatus of claim 1 wherein the means for unloading and
loading said passenger units during the driving of said support arms comprises a
rotatable clutch integrated between the support arm and a stationary area.
- 20 5. A motion-based apparatus comprising:
one or more passenger compartments movably coupled to one or more
support arms;
said support arms being attached at a first end to a rotatable member;
said rotatable member positioned adjacent to a rotatable clutch;
25 means for rotating said rotatable member and said rotatable clutch; and
one or more transfer units affixed to said rotatable clutch for facilitating
transfer of the one or more passenger compartments between the one or more
support arms and a stationary area during apparatus operation.
- 30 6. The motion-based apparatus of claim 5 wherein said rotatable member and
said rotatable clutch are circular in shape.
7. The motion-based apparatus of claim 6 wherein said rotatable clutch is
35 positioned within an inner circumference of said rotatable member.
8. The motion-based apparatus of claim 5 wherein the stationary area includes

one or more stationary units for receiving said guide member.

9. The motion-based apparatus of claim 5 wherein said support arms, transfer units and stationary units each have an I-beam or t-slot cross-section.

10. The motion-based apparatus of claim 7 wherein the stationary area is located within an inner circumference of said second rotatable clutch member.

11. The motion-based apparatus of claim 5 wherein the stationary area facilitates loading and unloading of passengers into and out of the passenger compartments.

12. The motion-based apparatus of claim 5 wherein said passenger compartments are gimbaled about three axes.

13. The motion-based apparatus of claim 5 wherein the transfer of the one or more passenger compartments between the one or more support arms and the stationary area includes the steps of:

accelerating the rotatable clutch to a rotational speed generally equivalent to that of the rotatable member such that a transfer unit is aligned with a support arm and corresponding passenger compartment;

causing said guide member and corresponding passenger compartment to traverse along the support arm such that the guide member engages the transfer unit;

decelerating the rotatable clutch to a stop such that the transfer unit is aligned with a stationary unit; and

causing said guide member to traverse the transfer unit and engage the stationary unit.

14. The motion-based apparatus of claim 5 wherein the one or more passenger compartments include a video monitor.

15. The motion-based apparatus of claim 5 wherein the one or more passenger compartments include a sound system.

16. The motion-based apparatus of claim 5 wherein the one or more passenger compartments include means for scenting the compartment.

7406.00001

17. The motion-based apparatus of claim 5 wherein the one or more passenger compartments include means for misting the compartment.

5 18. A motion-based system comprising:

one or more passenger units movably supported by radial tracks integrated within a circular platform;

means for rotating said circular platform; and

10 means for unloading and loading said passenger units during the driving of said circular platform.

19. The motion-based system of claim 18 wherein the one or more passenger compartments are movably supported by a wheeled base member.

15 20. The motion-based system of claim 18 wherein the means for driving said platform is one or more motors.

21. The motion-based system of claim 18 wherein the means for unloading and loading said passenger units during the driving of said support arms comprises a clutch platform integrated between the platform and a stationary area.

22. A motion-based apparatus comprising:

one or more passenger compartments supported by a first series of tracks integrated in a rotatable planar platform;

25 said platform positioned adjacent to a rotatable clutch platform having a second series of tracks; and

means for rotating said platform and said rotatable clutch platform to facilitate transfer of the passenger compartments from the platform to a stationary platform.

30 23. The motion-based apparatus of claim 22 wherein the transfer of the one or more passenger compartments between the platform and the stationary platform includes the steps of:

35 accelerating the rotatable clutch platform to a rotational speed generally equivalent to that of the platform such that a first platform track is aligned with a second clutch platform track;

causing said passenger compartment to traverse along the aligned tracks such that the passenger compartment is supported by the clutch platform;

7406.00001

decelerating the rotatable clutch platform to a stop such that the clutch platform track is aligned with a stationary platform track; and

causing said passenger compartment to traverse the clutch platform track to the stationary platform track.

5

24. The motion-based apparatus of claim 22 wherein said one or more passenger compartments are gimbaled about three axes.

10

25. The motion-based apparatus of claim 22 wherein the one or more passenger compartments include a video monitor.

26. The motion-based apparatus of claim 22 wherein the one or more passenger compartments include a sound system.

15

27. The motion-based apparatus of claim 22 wherein the one or more passenger compartments include means for scenting the compartment.

28. The motion-based apparatus of claim 22 wherein the one or more passenger compartments include means for misting the compartment

20

29. A method of subjecting one or more passengers to varying forces in a system having a constant rotational velocity, comprising:

providing one or more passenger units supported by one or more radial members, said radial members positioned about a central stationary hub;

25

rotating said radial members about said central hub; and

moving said one or more passenger units along said radial members such that their distance from the central hub is increased or decreased.

30

30. The method of claim 29 wherein the one or more radial members are support arms.

31. The method of claim 29 wherein the radial member is a platform having a plurality of tracks.

35

32. A motion-based apparatus comprising:

one or more passenger units supported by one or more members positioned radially about a central stationary hub;

7406.00001

means for rotating said one or more members in a generally circular path; and
means for moving said passenger units radially upon said members so that
distance of the passenger unit from the central hub is changed.

5 33. The motion-based apparatus of claim 32 wherein the one or more radial
members are support arms.

34. The motion-based apparatus of claim 32 wherein the radial member is a
platform having a plurality of tracks.

10

35. A motion-based apparatus comprising:
one or more passenger units movably coupled to one or more support arms,
said support arms each formed of a plurality of segments such that said segments
may be rotated about a longitudinal axis of the support arms;

15

means for driving said support arms in a generally circular path; and
means for unloading and loading said passenger units during the driving of
said support arms in a generally circular pattern.

20

36. The motion-based apparatus of claim 35 wherein each segment supports one
or more passenger units.

37. The motion-based apparatus of claim 35 wherein each segment comprises an
I-beam cross-section.

25

38. A method of subjecting one or more passengers to varying forces in a system
having a constant rotational velocity, comprising:

providing one or more passenger units supported by one or more radial
members, said radial members positioned about a central stationary hub, said radial
members each formed of multiple segments rotatable about a longitudinal axis of
said radial members;

30

rotating said radial members about said central hub; and
moving said one or more passenger units along said radial members such
that their distance from the central hub is increased or decreased.